

WHAT IS CLAIMED IS:

1. A method for transmitting data packets via a connection in a packet-based data-transmission network, comprising:  
creating the data packets such that each comprise useful data and packet data containing information items necessary for the transmitting; and  
creating the packet data of the data packets at least partly from memory packet data that have been previously stored for the connection.
2. The method of claim 1, further comprising calculating the packet data for at least one data packet in accordance with a stack of protocol layers in the data-transmission network and storing packet data for at least one data packet as memory packet data for the connection.
3. The method of claim 2, characterized in that after setting up the connection, at least a first data packet is not transmitted via the data-transmission network.
4. The method of claim 2, further comprising calculating the packet data by a main processor in accordance with a stack of protocol layers and creating data packets by an auxiliary processor using memory packet data.
5. The method of claim 1, further comprising subdividing the packet data into packet-data fields.
6. The method of claim 1, characterized in that the packet data meet the requirements of protocol layers.
7. The method of claim 1, further comprising transferring the memory packet data at least in part unaltered to the packet data of the data packets.

8. The method of claim 1, further comprising altering the memory packet data at least in part as a function of the useful data and the connection and transferring the memory packet data in altered form to the data packets.
9. The method of claim 1, further comprising altering the memory packet data at least in part as a function of the useful data or the connection and transferring the memory packet data in altered form to the data packets.
10. The method of claim 1, characterized in that the useful data contain speech data, audio data or video data.
11. The method of claim 1, characterized in that the connection is a telephone connection or a fax connection.
12. The method of claim 1, further comprising providing the useful data with packet data in accordance with a real-time protocol.
13. The method of claim 1, further comprising providing the useful data with packet data in accordance with an IP protocol.
14. The method of claim 1, characterized in that the data-transmission network is selected from a group comprising an Ethernet, HDLC, frame-relay, IP network, and an ATM network.
15. The method of claim 1, further comprising reading the useful data in via a physical terminal and creating the packet data at least in part as a function of the terminal via which the useful data are read in.
16. A device for transmission of data packets via a connection in a packet-based data-transmission network comprising:

means for creating the data packets, which each comprise useful data and packet data containing information items necessary for the transmission;

and means for creating the packet data of the data packets at least in part from the memory packet data stored for the connection.

17. The device of claim 16, characterized in that the packet data for at least one data packet are calculated in accordance with a stack of protocol layers in the data-transmission network and are stored as memory packet data for the connection.

18. The device of claim 16, characterized in that after setting up the connection, at least a first data packet is not transmitted via the data-transmission network.

19. The device of claim 16, characterized in that the packet data are calculated by a main processor in accordance with a stack of protocol layers and data packets are created by an auxiliary processor using memory packet data.

20. The device of claim 16, characterized in that the packet data are subdivided into packet-data fields.